



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,074	10/12/2005	Daisuke Kanenari	AOK-0250	3776
30678	7590	07/11/2007	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ LLP			SCOTT, ANGELA C	
1875 EYE STREET, N.W.				
SUITE 1100			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20036			1709	
MAIL DATE		DELIVERY MODE		
07/11/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/553,074	KANENARI ET AL.
	Examiner	Art Unit
	Angela C. Scott	1709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 25 June 2007.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) 8 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-7 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 10/05 & 04/07.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election of Group I – Claims 1-7 directed to a method of producing rubber in the reply filed on June 25, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim 8 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 25, 2007.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

Japanese patent abstract JP 2002-69103 listed on the IDS submitted on April 30, 2007 has been struck through because the full machine translation for it has been considered, as listed on Form PTO-892. Additionally, some parts of the Japanese document could not be translated through a machine translation and therefore, an oral translation was given by Steven Spar, PTO translator.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ozer et al. (US 5,252,061).

Ozer et al. teaches a method using a pulse combustion dryer (Col. 1, lines 58-59) to dry different polymers such as acrylic-latexes (Col. 7, line 42). Moreover, Ozer et al. teaches that material introduced into the system will be atomized by hot gas pulses (Col. 1, lines 40-46). This atomization causes rapid drying of the material and allows for it to be collected as a fine, dry powder (Col. 1, lines 40-46). Additionally, it was well-known in the art at the time of the invention that rubber latexes and acrylic latexes are equivalents.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozer et al. (US 5,252,061) in view of Miyatake et al. (US 2003/0092819).

Ozer et al. teaches a method using a pulse combustion dryer (Col. 1, lines 58-59) to dry different polymers such as acrylic-latexes (Col. 7, line 42). Moreover, Ozer et al. teaches that material introduced into the system will be atomized by hot gas pulses (Col. 1, lines 40-46). This atomization causes rapid drying of the material and allows for it to be collected as a fine, dry powder (Col. 1, lines 40-46). Additionally, it was well-known in the art at the time of the invention that rubber latexes and acrylic latexes are equivalents.

Ozer et al. does not teach that the solid concentration of the rubber latex is 60% by weight or less. However, Miyatake et al. does teach an acrylic rubber latex having a solid concentration of 10-50% by weight, more preferably 20-40% by weight (¶50). Ozer et al. and Miyatake et al. are combinable because they are both reasonably pertinent to the particular problem with which the inventor was concerned, namely, obtaining dried particles from a latex. At the time of the invention, a person of ordinary skill in the art would have found it obvious to have used a rubber latex having a sold concentration of 10-50% by weight, as taught by Miyatake et al., in the pulse combustion drying method, as taught by Ozer et al., and would have been motivated to do so because of the easiness in controlling the size of the particles as suggested by Miyatake et al. (¶50).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozer et al. (US 5,252,061) in further view of Toratani et al. (JP 2002-069103) and Chandran et al. (US 5,842,289). For convenience, the citations for Toratani et al. below come from the attached English translation.

Ozer et al. teaches a method using a pulse combustion dryer (Col. 1, lines 58-59) to dry different polymers such as acrylic-latexes (Col. 7, line 42). Moreover, Ozer et al. teaches that material introduced into the system will be atomized by hot gas pulses (Col. 1, lines 40-46). This atomization causes rapid drying of the material and allows for it to be collected as a fine, dry powder (Col. 1, lines 40-46). Additionally, it was well-known in the art at the time of the invention that rubber latexes and acrylic latexes are equivalents.

Ozer et al. does not teach that the frequency of the pulse combustion is between 250 and 1200 Hz. However, Chandran et al. does teach a pulse combustion device used at a frequency in a range of from about 50 Hz to about 500 Hz (Col. 3, lines 13-16). Ozer et al. and Chandran et al. are combinable because they are from the same field of endeavor, namely, pulse combustion devices. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use a frequency range of about 50 Hz to about 500 Hz, as taught by Chandran et al., in the pulse combustion drying method, as taught by Ozer et al., and would have been motivated to do so because if the frequency is too high or too low, drying may not occur or may not be sufficiently obtained.

Ozer et al. does not teach that the drying chamber is at a temperature of 140° C or less. However, Toratani et al. does teach using a temperature of between 100° C and 140° C when drying is done in a single step (¶23). Ozer et al. and Toratani et al. are combinable because they are both reasonably pertinent to the particular problem with which the inventor was concerned, namely, drying latexes. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use a single step drying temperature of between 100° C and 140° C, as taught by Toratani et al., in the pulse combustion drying method, as taught by Ozer et al., and would have been motivated to do so because rubber latexes are temperature sensitive.

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozer et al. (US 5,252,061) in view of Toratani et al. (JP 2002-069103).

Ozer et al. teaches a method using a pulse combustion dryer (Col. 1, lines 58-59) to dry different polymers such as acrylic-latexes (Col. 7, line 42). Moreover, Ozer et al. teaches that

Art Unit: 1709

material introduced into the system will be atomized by hot gas pulses (Col. 1, lines 40-46). This atomization causes rapid drying of the material and allows for it to be collected as a fine, dry powder (Col. 1, lines 40-46). Additionally, it was well-known in the art at the time of the invention that rubber latexes and acrylic latexes are equivalents.

Ozer et al. does not teach using a natural rubber latex and adding at least 0.001 parts by weight of a viscosity stabilizing agent such as a hydroxyl amine, a semicarbazide or a dimedone to the natural rubber latex. However, Toratani et al. does teach using a natural rubber latex (¶1) and adding 0.001 to 3 parts by weight based on the solid content in the natural rubber latex (¶20) of a viscosity agent such a hydroxylamine, a semicarbazide, or a dimedone to the natural rubber latex (¶4). At the time of the invention, a person of ordinary skill in the art would have found it obvious to use add 0.001 to 3 parts by weight of a viscosity agent such as the ones listed above to a natural rubber latex, as taught by Toratani et al., in the pulse combustion drying method, as taught by Ozer et al., and would have been motivated to do so because it can help to prevent storage hardening (¶4), as suggested by Toratani et al., and it will help to keep the natural rubber latex more viscous.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 274-3303. The examiner can normally be reached on Monday through Friday, 7:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACS  
July 6, 2007



MARK EASHOO, PH.D.  
SUPERVISORY PATENT EXAMINER

09 / Jul / 07